
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for *Cordylanthus palmatus* (Palmate-Bracted Bird's-Beak)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service determines *Cordylanthus palmatus* (palmate-bracted bird's-beak) to be an endangered species. The range and population numbers of the palmate-bracted bird's-beak have been reduced by agricultural conversion, intensive livestock grazing, urban development, and other land use activities that altered the natural plant communities in California that once supported the species. Historically, the species is known from scattered locations in Fresno and Madera Counties in the San Joaquin Valley, north into the Sacramento Valley from San Joaquin to Colusa Counties, and west into the Livermore Valley, Alameda County. *Cordylanthus palmatus* presently is known from only three small populations in Alameda, Fresno, and Yolo Counties. Habitat modifications by urban and agricultural development and uncontrolled off-road vehicle (ORV) use of one area pose the most serious and immediate threats. Low population numbers may also threaten this annual plant through genetic depletion and reduced reproductive potential. This final rule will implement the full protection provided by the Endangered Species Act of 1973, as amended.

EFFECTIVE DATE: The effective date of this rule is July 31, 1986.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Lloyd 500 Building, 500 N.E. Multnomah Street, Suite 1692, Portland, Oregon 97232.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne S. White, Chief, Division of Endangered Species, at the above address (503/231-6131 or FTS 429-6131).

SUPPLEMENTARY INFORMATION:

Background

Cordylanthus palmatus, an annual herb of the snapdragon family (Scrophulariaceae), was originally collected by Ferris in 1916 and described by her in 1918 under the name *Adenostegia palmata*. Macbride (1919) recognized the species under the genus *Cordylanthus* (a conserved name). Chuang and Heckard (1973) revised the taxonomy of the genus *Cordylanthus*, subgenus *Hemistegia*, and included plants from the San Joaquin Valley that had previously been treated as *C. carnulosus* or *C. palmatus* ssp. *carnulosus* within *C. palmatus*, without recognizing infraspecific taxa.

Plants of *Cordylanthus palmatus* are from 4 to 12 inches tall with several to many ascending-spreading branches from near or above the base of the stem. The sparsely to densely hairy stems occasionally have short glandular hairs. The leaves and stems are grayish green and sometimes covered with salt crystals. The small, pale, whitish flowers, ½–1 inch long, are arranged in dense spikes. Each flower is surrounded by a small, palmately-lobed floral bract.

Little is known of the ecology of *Cordylanthus palmatus* aside from its occurrence in and possible confinement to a particular soil type called saline-alkali (black alkali) of lowland flats and plains. This habitat, historically rare throughout much of cismontane California, now is much reduced in extent. Like other members of the genus and related genera in the family, *Cordylanthus palmatus* is hemiparasitic on the roots of various seed plants (Chuang and Heckard 1971).

Historically the species was collected from seven scattered locations in Fresno, Madera, San Joaquin, Yolo, and Colusa Counties, California. A recent collection (1982) extended the known range into the Livermore Valley in Alameda County, California. The range of this species largely has been affected by agriculture, livestock grazing, and

destruction of much of the pristine valley habitat in California (Heady 1977), and undoubtedly contributed to the decline of *Cordylanthus palmatus*. Heckard (1979) attributed the extirpation of five previously known colonies of this plant in Colusa, San Joaquin, Yolo, Madera, and Fresno Counties largely to soil reclamation and conversion of land for agricultural use. Prior to destruction of one population, five and one-half air miles east-southeast of Mendota in Fresno County, seed was collected by Heckard. Ten cultivated seedlings from greenhouse stock established from the Mendota site were transplanted by Heckard to the Mendota State Wildlife Management Area less than one mile from the now extirpated donor site. At present, three populations are known; two colonies are on private and city-owned lands near the cities of Livermore, Alameda County, and Woodland, Yolo County; and the third, a transplanted colony, grows within a small portion of the Mendota State Wildlife Management Area near Mendota, Fresno County, California.

In the late 1970's and early 1980's searches of likely habitats within the range of the species by local botanists, personnel from the California Department of Fish and Game, and the U.S. Fish and Wildlife Service failed to locate any additional colonies of this species. The rarity of the saline-alkaline soils occupied by this species and the intensive agricultural and urban development within the species' range make the likelihood of finding additional colonies remote.

The Secretary of the Smithsonian Institution, as directed by Section 12 of the Endangered Species Act of 1973, prepared a report on those native U.S. plants considered to be endangered, threatened, or extinct in the United States. This report (House Document No. 94-51), which included the palmate-bracted bird's-beak, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the *Federal Register* (40 FR 27823) accepting the report as a petition within the context of former section 4(c)(2) of the Act (petition review provisions are now contained in Section 4(b)(3)), and giving notice of its intention to review the status of the plant taxa named therein, including the palmate-bracted bird's-beak. As a result of this review, on June 16, 1976, the Service published a proposed rule in the *Federal Register* (41 FR 24523) to determine approximately 1,700 vascular plant species, including the palmate-bracted bird's beak, to be

Act required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice (44 FR 70796) withdrawing the portion of the June 16, 1976, proposal that had not been made final, along with four other proposals that had expired and had to be withdrawn for administrative reasons.

The Service published an updated notice of review for plants on December 15, 1980 (45 FR 82480). This notice included *Cordylanthus palmatus* as a candidate species. On February 15, 1981, the Service published a notice (48 FR 6752) if its prior finding that the listing of this species may be warranted in accordance with Section 4(b)(3)(A) of the Act as amended in 1982. On October 13, 1983, and again on October 12, 1984, further findings were made that the listing of *Cordylanthus palmatus* was warranted, but precluded by other pending listing actions, in accordance with Section 4(b)(3)(B)(iii) of the Act. Such a finding requires the petition to be recycled, pursuant to Section 4(b)(3)(C)(i) of the Act. On July 15, 1985, the Service proposed the palmate-bracted bird's-beak as an endangered species (50 FR 28870). The Service now determines this plant to be endangered with the publication of this final rule.

Summary of Comments and Recommendations

In the July 15, 1985, proposed rule (50 FR 28870) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county and city governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices that invited general public comments were published in the *Oakland Tribune* on August 20, 1985, the *Fresno Bee* on August 21, 1985, the *Tri Valley Herald* on August 20, 1985, the *Sacramento Bee* on August 15, 1985, and the *Woodland Democrat* on August 17, 1985. Mr. Leo J. Parry of San Ramon, California requested a public hearing on the proposal to list the palmate-bracted bird's-beak on August 13, 1985. The Service held a public hearing at the San Joaquin Delta College, San Joaquin County, California, on November 15, 1985. Eight people attended the hearing. The comment period was reopened in order to accommodate the hearing

Thirteen comments were received during the open comment period: nine from private individuals or organizations, two from other Federal government agencies, and two from State and local government agencies. Multiple comments (whether written or oral) from the same individual were regarded as one comment. Six of the thirteen comments expressed support for the listing. The California Department of Fish and Game commented in support of the listing and also noted that *Cordylanthus palmatus* is listed by the California Fish and Game Commission as an endangered species. Three comments (two from Federal agencies and one from the City of Livermore) gave no clear indication of a position on the proposal.

Three comments from private individuals indicated opposition to the listing and requested that landowners be compensated for their property. One commenter suggested that the species may also occur in the area of Novato, California, and that the Livermore population is growing in an area that is only suitable habitat for the species because of human-caused alterations that have restricted drainage of rainwater. Two other species of *Cordylanthus* grow in the area around Novato, but *C. palmatus* is not known to occur there, and habitat suitable for it is absent. Although the area in which the Livermore population grows has been subjected to various kinds of disturbance, there is no evidence that the species' occurrence there is a consequence of such disturbance. No substantive data were presented that controvert the information presented in the proposal or indicate that *Cordylanthus palmatus* does not qualify biologically as an endangered species. The listing of endangered or threatened species pursuant to the Endangered Species Act, as amended, is required to be based on biological grounds, and therefore, it cannot be affected or influenced by economic considerations. The Service recognizes that such listings may affect various State and local entities, planned and approved development proposals, and local planning processes. Federal listings, however, primarily affect Federal activities impacting the palmate-bracted bird's-beak. Nevertheless, in instances where local or Federal developments or proposed activities may adversely affect Federally listed species, the Service has found that modifications or alternative designs usually allow projects to proceed while providing adequate protection for the species. Specific procedures for conflict resolution are

provided in sections 7 and 10(a) of the Act.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Cordylanthus palmatus* should be classified as an endangered species. Procedures found at Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Cordylanthus palmatus* (Ferris) Macbride (palmate-bracted bird's-beak) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Specimens of *Cordylanthus palmatus* historically have been collected from eight sites in six counties in California. Only two natural colonies and one transplanted population of the species now are extant. Habitat loss resulting from soil reclamation and urban and agricultural developments probably extirpated the six former colonies of *Cordylanthus palmatus*. The remaining three populations have declined in the past and face present and potential threats of further habitat loss.

At the transplant site within the Mendota State Wildlife Area, plant numbers are so low that any disturbance to the habitat could threaten the population with extirpation. Population numbers have fluctuated probably as a result of the annual nature of the plant and habitat destruction by off-road vehicles (ORV's). Of the ten transplanted specimens, five were destroyed in 1973 by ORV's even though the plants were protected by wire coverings. In 1981 only one plant was observed on the preserve, but in 1982 the population grew to about 20 to 30 plants (Dr. L.R. Heckard, University of California, Berkeley, telephone communication). In 1983 between 20 and 30 plants were observed by Peggy Smith, a local botanist (John Stebbins, California State College, Fresno, telephone communication). The manager of the wildlife area is aware of the population and is attempting to protect the site from encroachment by ORV's (Bob Huddleston, California Department of Fish and Game, telephone and written communication). It is likely that without active protection and management the population will decline and disappear.

Active management such as seed dispersal in likely habitats and fencing will be necessary to prevent additional population declines.

The population near Woodland, California, originally occupied about 10 acres, but a large portion (approximately 8 acres) was plowed in 1982 (Rick York, California Native Plant Society, personal communication) and in subsequent years. Plowing eliminated the largest portion of the colony (probably 75 percent or more). The remaining population consists of about 100-200 plants along a drainage ditch and in an open field. This site is threatened by a sewage treatment facility proposed by the City of Woodland.

The Livermore Valley population consists of about 2,000 to 5,000 plants scattered over approximately 290-350 acres (U.S. Army Corps of Engineers, San Francisco District, personal communication) within an area zoned for residential and agricultural development. Several developments have been proposed for the entire area. In January of 1983, approximately 90 acres of the Livermore site (about 20 percent of the area) was bulldozed and a portion of associated wetlands were filled (U.S. Army Corps of Engineers, memorandum, 1983).

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not applicable.

C. *Disease or predation.* Historically, cattle grazing affected many of the areas once supporting this species. In some areas the plant species composition was undoubtedly altered significantly by grazing animals. Existing grazing levels do not appear to threaten those areas still supporting *Cordylanthus palmatus*.

D. *The inadequacy of existing regulatory mechanisms.* Although the State of California lists the palmate-bracted bird's-beak as endangered, State law does not provide adequate protection for this species in its natural habitat. The Native Plant Protection Act provides that a land owner who has been notified by the California Department of Fish and Game that a State listed plant grows on his/her property must notify the Department of Fish and Game "at least 10 days in advance of changing the land use to allow for salvage of such plant." Although State law also provides for such measures as research and land acquisition, provisions of the Endangered Species Act would offer needed additional protection for this species and its habitat.

E. *Other natural or manmade factors affecting its continued existence.*

Population numbers, especially at the Mendota site, are low for an annual plant. Genetic depletion and reduced reproductive potential may further threaten the palmate-bracted bird's-beak.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Cordylanthus palmatus* as endangered. Endangered status, rather than threatened, appears most appropriate considering the past and present declines in the species' range and numbers of plants, and potential and current threats to the species' continued existence. Only three colonies are known to exist, all have suffered recent damage, and the two natural populations are threatened with further human induced losses. Plants on private and municipally owned lands are imminently threatened by proposed developments. The depauperate transplanted colony on the Mendota State Wildlife Area will likely disappear without active management. For reasons set forth below, the Service further finds it is not prudent to designate critical habitat for the palmate-bracted bird's-beak at this time.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. Considering the highly vulnerable status of the three known populations, the lack of Federal protection from collecting on non-Federal land, and past destruction of habitat, this finding is appropriate. Because of a substantial possibility of vandalism, publication of precise maps and descriptions of critical habitat could make this plant even more vulnerable and could result in further declines in the species. Therefore, it would not be prudent to determine critical habitat for the palmate-bracted bird's-beak at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery action, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in

conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the following listing. The protection required of Federal agencies and the prohibitions against collecting are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is designated. Regulations implementing this interagency cooperation provision of the Act are published at 51 FR 19926 (June 3, 1986, effective July 3, 1986). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Federal activities that could affect *Cordylanthus palmatus* in the future include, but are not limited to: The issuance of permits or approvals for roads or transmission lines, or funding or approval to build or construct any structures or facilities in or near any of the areas now supporting *Cordylanthus palmatus*.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to endangered plant species. All trade and collecting prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any endangered plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell it or offer it for sale in interstate or foreign commerce, or remove and reduce it to possession from areas under Federal jurisdiction. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered plant species under certain circumstances. No trade is known for this plant. It is anticipated that few trade permits would ever be sought or

issued since this species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

References Cited

- Chuang, T.I., and L.R. Heckard. 1971. Observations on root parasitism in *Cordylanthus* (Scrophulariaceae). *Amer. J. Bot.* 58:218-228.
- Chuang, T.I., and L.R. Heckard. 1973. Taxonomy of *Cordylanthus* subgenus *Hemistegia* (Scrophulariaceae). *Brittonia* 25:135-158.
- Ferris, R.S. 1918. Taxonomy and distribution of *Adenostegia*. *Bull. Torrey Bot. Club* 45:399-423.
- Heady, H.F. 1977. Valley grassland. In M.G. Barbour and J. Major (eds.), *Terrestrial Vegetation of California*, pp. 491-514. John Wiley and Sons, New York.
- Heckard, L.R. 1977. Rare Plant Status Report for *Cordylanthus palmatus*. California Native Plant Society, Berkeley, California. Unpubl. report. 4 pp.
- Macbride, J.F. 1919. Reclassified or new spermatophytes, chiefly North American. *Contrib. Gray Herb.* 59:28-39.

Author

The primary author of this final rule is Monty Knudsen, U.S. Fish and Wildlife Service, Sacramento Endangered Species Office, 2800 Cottage Way, Room E-1823, Sacramento, California 95825 (916/978-4866 or FTS 460-4866).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*)

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Scrophulariaceae, to the list of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Scrophulariaceae—Snapdragon family:						
<i>Cordylanthus palmatus</i>	Palmette-bracted bird's-beak	U.S.A. (CA)	E	235	NA	NA

Dated: May 30, 1986.

P. Daniel Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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